STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of:	)	Docket No. 01-AFC-22
	)	
Application for Certification for the San Joaquin Valley Energy Center	)	

APPLICANT'S POST-HEARING BRIEF

March 28, 2002

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TABLE OF CONTENTS

I. INTRODUCTION 1

II. AIR QUALITY 1

A. The SJVEC Project Will Comply with the Applicable Federal, State, and Local Laws, Ordinances, Regulations, and Standards, and with Mitigation, Does Not Result in Any Significant Air Quality Impacts. 3

B. The SJVEC Project has No Significant Impacts to Local Air Quality 4

1. SJVEC Will Meet or Exceed the SJVUAPCD's BACT Requirements, Meaning SJVEC Will Minimize Local Air Quality Effects. 4

2. SJVEC's Air Quality Impact Analysis Confirms That There Will be No Significant Local Air Quality Effects. 6

3. The Health Risk Assessment Performed for the SJVEC Project Confirms that there are No Adverse Local Air Quality Impacts. 7

C. The SJVEC Project Will Have No Significant Impacts on Regional Air Quality. 7

1. The SJVEC Project Will Not Cause Any Significant Unmitigated Cumulative Air Quality Impacts. 8

2. The SJVEC Project has Identified and Obtained Emission Reduction Credits to Fully Offset and Mitigate Any Potential Regional Air Quality Impact 8

3. The Issue of the Validity of SJVEC's ERCs Has Been Resolved. 9

4. There is No Need for Additional SO_2 Mitigation 10

5. The CEC Staff's Desire to Independently Review the Surrender of Emission Reduction Credits is Not Necessary Under CEQA 12

D. Construction Impacts from SJVEC Are Not Atypical and San Joaquin Valley APCD Regulations and Russell City Energy Center Conditions Should Form the Basis for SJVEC Conditions. 13

E. Findings and Conclusions. 21

III. NOISE 22

A. The SJVEC Project Will Comply with All Applicable LORS and Will Not Result in Any Significant Noise Impacts. 22

1. The SJVEC Will Be Located on a Site Zoned for Manufacturing With Very Few Residences in the Vicinity of the Project. 23

2. The SJVEC Project Will Include Extensive Onsite and Offsite Noise Attenuation Measures....23

B. The noise produced by the SJVEC will comply with all applicable LORS....27

1. Federal....27

2. State....27

3. Local....28

C. The noise produced by the SJVEC will not violate CEQA....30

1. The project will not generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies....31

2. The project will not generate excessive ground-borne vibration or ground-borne noise levels....31

3. The project will not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project....31

4. The project will not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project....41

D. Proposed Findings....42

E. Proposed Conditions of Certification....43

IV. VISUAL RESOURCES, VISIBLE WATER VAPOR PLUMES, PUBLIC HEALTH....46

V. CONCLUSION....47

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APPLICANT'S POST-HEARING BRIEF

I. INTRODUCTION

Pursuant to the Committee's direction at the close of Evidentiary Hearings on February 21, 2003, San Joaquin Valley Energy Center LLC ("Applicant") hereby files the following Opening Brief on Air Quality, Noise, and Visual Resources issues for the San Joaquin Valley Energy Center ("SJVEC") Application for Certification ("AFC"). Applicant is also filing concurrently under separate cover its brief on all other issues.

II. AIR QUALITY

Notwithstanding the substantial time, resources, and effort expended by all parties in this proceeding, the Air Quality issues associated with the SJVEC project have been distilled down to two discrete issues during the evidentiary hearings. Of those two issues, one has been resolved as a result of the U.S. EPA February 13, 2003 proposed rule while the second simply offers the Committee a clear path to decide the issue by following applicable Commission precedent.

First, with respect to the issue of emission reduction credits ("ERCs") for the SJVEC project, on February 13, 2003 the United States EPA issued a proposed rule that addresses all of the ERC issues raised during the proceeding. The U.S. EPA representative clearly stated during

the hearings that if the rule were to be approved in substantially the form as it was offered, the EPA would find that the project complies with all applicable LORS related to ERCs. The SJVUAPCD agreed with EPA's position. As the two agencies charged with enforcement of the federal and state clean air acts, their positions on this matter are not only entitled to great deference; they are, in fact, legally definitive. Even the Commission staff indicated that it is "extremely likely" that the EPA rule extinguished any issues related to the validity of the project's ERCs. (3/19 RT 311.) Given the resulting EPA rule (and absent the creation of some novel legal theory that would not be supported by the record), the ERC issues have been resolved, supporting the Committee's conclusions that with respect to ERCs the SJVEC project complies with all applicable LORS and results in no significant environmental impacts. (See Section I.C. below.)

Second, on the issue of construction mitigation measures, the Applicant and the Staff have offered the Committee a relatively simple choice. Applicant respectfully suggests that the Committee should follow the relevant Commission precedent and find the Applicant's proposed construction mitigation measures are adequate to address all issues related to both LORS compliance and mitigation of potential impacts. The potential construction impacts associated with the SJVEC project are typical of the potential impacts associated with projects of this scope and magnitude approved by the Commission. They are also typical of similar non-powerplant construction activities in the San Joaquin Valley. Because such potential impacts are typical, the SJVUAPCD has in place a set of construction mitigation measures memorialized in the District Rules and incorporated into the Conditions of Certification for the SJVEC project. The Applicant has offered refinements to the proposed construction conditions that make those conditions wholly consistent with applicable Commission precedent. (See Applicant's proposed

revisions and, in some instances, deletions of Conditions AQ-C1 through AQ-C7, and AQ-105, attached hereto as Attachment A). In short, in approving the construction conditions as proposed by the Applicant, the Committee's decision will be consistent with applicable LORS, will avoid potentially significant impacts, and will comport with applicable Commission precedent. (See Section I. D. below.)

In marked contrast, Staff asks the Commission to apply inapplicable Commission precedent. Specifically, the Staff is asking the Committee to impose conditions for this project that were applied by the Commission for a project with a 24 hour a day, seven days a week construction schedule for the Los Esteros Critical Energy Facility ("LECEF") "Demonstration Project." The SJVEC will not include the around-the-clock construction schedule of the LECEF. Simply put, the conditions that gave rise to the LECEF Demonstration Project are not applicable to the SJVEC project, and the Staff has utterly failed to offer evidence into the record that lessons learned from the LECEF Demonstration Project, if any, are applicable in this proceeding. Having failed to create a record to support their preferences, the Staff now invites the Committee to ignore relevant Commission precedent and the SJVUAPCD Rules (which were subject to a formal public rulemaking process consistent with the requirements of CEQA) in favor of imposing new conditions unsupported by the record. The Committee should reject this invitation.

A. The SJVEC Project Will Comply with the Applicable Federal, State, and Local Laws, Ordinances, Regulations, and Standards, and with Mitigation, Does Not Result in Any Significant Air Quality Impacts.

Mr. Gary Rubenstein of Sierra Research testified on behalf of the San Joaquin Valley Energy Center on the issue of Air Quality. For the reasons set forth below, the Committee should reach the conclusion that the San Joaquin Valley Energy Center is safe, and will meet all

of the air quality standards under all operating conditions, under all meteorological conditions and at all locations, based on conservative assumptions regarding background or existing air quality, operating levels, emission rates and meteorology. (2/19 RT 20.) In addition, the Committee should conclude that there are no significant, unmitigated air quality impacts associated with the San Joaquin Valley Energy Center if the conditions proposed by the Applicant are adopted. (2/19 RT 22-23.)

B. The SJVEC Project has No Significant Impacts to Local Air Quality.

With respect to local air quality effects, the San Joaquin Valley Energy Center (SJVEC) project addressed those issues with three different types of analyses: (1) pollution control technologies, (2) air quality impacts analysis, and (3) preparation of a health risk assessment. (3/19 RT 19-21.)

1. SJVEC Will Meet or Exceed the SJVUAPCD's BACT Requirements, Meaning SJVEC Will Minimize Local Air Quality Effects.

First, with respect to addressing local air quality impacts, the SJVEC project analyzed the appropriate pollution control technology and the "best available control technology" ("BACT"). (2/19 RT 19.) BACT is the fundamental cornerstone of any licensing process, requiring that new facilities use the cleanest technologies available. By ensuring that projects use the cleanest technologies, potential impacts on local air quality are minimized (2/19 RT 19).

In this case, the San Joaquin Valley Unified Air Pollution Control District's ("SJVUAPCD") Final Determination of Compliance ("FDOC," Ex. 4A.37) dated Sept. 27, 2002 confirms that the SJVEC project complies with BACT. (Ex. 4A.37, pp. 7-10.) The California Energy Commission (CEC or Commission) Staff, in the Staff Assessment Addendum, concurred in this conclusion. (Ex. 2, p. 4.1-56.)

With respect to carbon monoxide, the SJVEC project will comply with this BACT requirement through the use of dry low-NO_x duct burners that minimize incomplete combustion, and an oxidation catalyst. (Ex. 4A.37, p. 7.) The SJVUAPCD has determined that BACT for CO is an emission limit of 4.0 ppmvd @ 15% O_2, averaged over three hours. (Ex. 4A.37, p. 36.) In simplest terms, the CO requirements in the permit are so stringent that the carbon monoxide concentrations inside the stack will be at or below the ambient air quality standard for carbon monoxide that is the level that is safe to breathe in ambient air.

Nitrogen oxides (NO_x) will be controlled as well through a combination of two technologies. One is the use of dry low-NO_x combustors. The second is a system called selective catalytic reduction (SCR), a system that the Commission has reviewed many times before and found to be safe and effective. Each combustion gas turbine is designed to meet a NO_x emission concentration limit of 2.0 ppmvd NO_x @ 15% O_2, averaged over 1 hour, during all operating modes except gas turbine start-ups and shutdowns. (Ex. 4A.37, pp. 7-8.) This is more stringent than the current District BACT and CARB determinations for NO_x. (Ex. 4A.37, p. F-3.) The HRSGs will be equipped with low-NO_x duct burners, which are designed to minimize NO_x emissions. The duct burner exhaust gases will also be abated by the SCR system and, when combined with the gas turbine exhaust, will achieve NO_x emission concentrations of 2.0 ppmvd @ 15% O_2, averaged over one hour. (Ex. 4A.37, pp. 7-8.)

Volatile organic compounds (VOCs) will also be controlled through the use of dry low-NO_x combustors. (Ex. 1, p. 8.1-50.) The Applicant has agreed to VOC emission limitations of 1.4 ppmvd @ 15% O_2 without duct firing, and 2.0 ppmvd @ 15% O_2 with duct firing. (Ex. 4A.37, p. 11.) Because these emission limitations are equal to or more stringent than the current

SJVUAPCD and CARB BACT determinations for VOC of 2 ppmvd @ 15% O_2, averaged over 1 hour, SJVEC satisfies BACT for VOC. (Ex. 4A.37, p. 11, F-4 to F-5.)

Emissions of sulfur dioxide (SO_2) and particulate matter (PM_{10}) are controlled through the use of natural gas as a fuel. SJVEC will use exclusively PUC-regulated natural gas, which satisfies the BACT requirement for SO_2. (Ex. 4A.37, p. 37. Similarly, particulate matter (PM_{10}) emissions are controlled through the use of clean burning natural gas for the combustion turbines and the HRSG units, which will result in minimal PM_{10} emissions and minimal formation of secondary PM_{10}. (Ex. 4A.37, p. 37, F-6.)

The SJVEC project will be among the cleanest fossil fuel power plants in the world. (2/19 RT 137.)

2. SJVEC's Air Quality Impact Analysis Confirms That There Will be No Significant Local Air Quality Effects.

Mr. Rubenstein testified that the SJVEC project had performed a thorough air quality impact analysis, often referred to as a modeling analysis. (2/19 RT 19-21.) The air quality impact analysis uses dispersion models required by USEPA and the SJVUAPCD, and a number of worst case assumptions. (Ex. 4A, p. 7; 2/19 RT 19-21; Ex. 4A.37, Attachment K.) This analysis is based on the assumption of worst case operating scenarios for the plant. Specifically, the analysis superimposes on that assumption of worst case operating scenarios, the assumption of worst case emissions, the maximum allowable emissions from the plant, and worst case weather conditions at the project site. (*Ibid*.)

Thus the air quality impact analysis assumes: (a) the worst case operating assumptions, (b) worst case emission factors, and (c) worst case weather conditions, even if (d) those physically cannot occur at the same time. For example, the worst case of emissions from a powerplant might occur during winter conditions when the ambient temperatures are lowest and

the mass flow through the engines are highest. The worst case meteorological conditions for dispersion might occur in the summer. The air quality impacts analysis nonetheless assumes that those worst case emissions aspects of the wintertime apply during the summer meteorological conditions, even though that is not physically possible.

The air quality impact analysis shows where the greatest impact is and what those levels are. All other locations would have lesser levels of air quality impacts.

The purpose of all of those conservative assumptions is to make sure that the SJVEC project will not cause any violations of any state or air quality standards anywhere, at any time, under any weather conditions and under any operating conditions. (2/19 RT 19-20.) The air quality impacts analysis confirms that SJVEC will not cause any violations at any location, at any time, under any conditions. (*Ibid*.; Ex. 4A.37, Attachment K.)

3. The Health Risk Assessment Performed for the SJVEC Project Confirms that there are No Adverse Local Air Quality Impacts.

The SJVEC Health Risk Assessment (HRA) confirms that there will be no significant adverse local air quality impacts associated with the SJVEC project. The results of the HRA show that the health risk is not significant at any location, at any time, under any operating conditions. The public health impacts associated with the project are not in dispute with CEC Staff.

C. The SJVEC Project Will Have No Significant Impacts on Regional Air Quality.

The SJVEC project will have no significant impacts on regional air quality. This finding of no significant impact is confirmed by the two components to the regional air quality studies performed by the SJVEC project: (1) cumulative impacts analyses regarding regional air quality; and (2) emission offset requirements. Both of these regional impact analyses are considered in turn below.

1. The SJVEC Project Will Not Cause Any Significant Unmitigated Cumulative Air Quality Impacts.

Both the Applicant and CEC Staff evaluated the potential for significant cumulative air quality impacts. (Ex. 4A, p. 7; Ex. 2, p. 4.1-57 to 4.1-58.) In each case, the conclusion was that the SJVEC project would not cause any significant cumulative air quality impacts. (*Ibid.*) This issue is not in dispute.

2. The SJVEC Project has Identified and Obtained Emission Reduction Credits to Fully Offset and Mitigate Any Potential Regional Air Quality Impact.

Emission offsets are one of the most misunderstood aspects of the air quality regulatory program. Emission offsets are not intended to protect local air quality. (2/19 RT 22.) Instead, emission offsets are part of a regional mitigation program designed to ensure that new plants of any type can be constructed while still making sure that progress towards cleaner air is maintained. Emission offsets are not an option that can be elected by a project applicant to avoid any other requirements. Emission offsets are mandated by local regulations, state law and federal law. (Ex. 4A, p. 7.)

SJVEC has provided offsets for this project as required by the SJVUAPCD. Specifically, SJVEC has provided offsets for precursors of ozone, hydrocarbons and oxides of nitrogen, and for PM_{10}, in the quantities required by applicable law and regulation. (Ex. 4A.37, pp. 38-43; Ex. 2, p. 4.1-62, Ex. 4A, p. 7; 2/19 RT 36-37.)

Emissions offsets are required under a regulatory program that was established in California in the late 1970s to replace a program that previously had been based on dispersion modeling and was shown simply not to work. The emission offset program was intended to ensure that improvements in air quality can be achieved without completely shutting down industrial growth. The emission offsets program is also intended to mesh economic growth with air quality objectives.

3. The Issue of the Validity of SJVEC's ERCs Has Been Resolved.

In the Staff Assessment Addendum, the CEC Staff argued that the emission reduction credits proposed for use by the San Joaquin Valley Energy Center were not acceptable for use. (Ex. 2, pp. 4.1-52 to 4.1-56.) The basis for the CEC Staff's position was related to a variety of documents prepared by the staff of the U.S. Environmental Protection Agency related to the SJVEC project and other projects. (*ibid.*) The CEC Staff acknowledged that the emission reduction credits proposed for use in the SJVEC case complied with applicable SJVUAPCD requirements. (Ex. 2, p. 4.1-52.) The CEC Staff did not cite any local, state or federal law, ordinance, regulation or standard that would be violated by the use of the proposed emission reduction credits for the SJVEC project. (Ex. 2, pp. 4.1-52 to 4.1-56.)

During the Committee's February 19 hearing, a witness from the U.S. EPA indicated that a proposed rule published on February 13, 2003 would eliminate any questions regarding the acceptability of the emission reduction credits proposed for the SJVEC project. (2/19 RT 138-139; 2/19 RT 221; Ex. 4A.53.) The SJVUAPCD's witness, Mr. Dave Warner, indicated that the public comment period on the proposed rule would close on March 17, 2003. (2/19 RT 329; Ex. 4A.53.) CEC Staff indicated that they expected that the adoption of this rule by U.S. EPA would address their concerns regarding the acceptability of the emission reduction credits as well. (2/19 RT 169; 2/19 RT 296-298.) In the unlikely event that the CEC Staff takes the position that the resolution of this issue by the recent EPA rule is insufficient, it is particularly important for the Committee to note that Mr. Haber indicated that, in his opinion, the CEC does not have the authority to intervene in what is basically a dispute between the SJVUAPCD and EPA. (2/19 RT 140.) The Commission should clearly find that credits which are found to be acceptable by the SJVUAPCD are recognized by the Commission and, to the extent there is a dispute regarding

acceptability between the SJVUAPCD and EPA, such a dispute should be resolved by and between those agencies, and not by the CEC Staff.

Finally, keeping the proper perspective demands the recognition that the dispute between the U.S. EPA and the SJVUPCD has correctly been characterized as an "accounting issue." (3/19 RT 142; see also 3/19 RT 330, 331.) The characterization of this dispute as an "accounting issue" is significant in that it confirms that the issues between the EPA and the District have been focused on accounting procedures in various regulatory settings that must be respected; however, there has never been any question that as an accounting issue, there are absolutely no potential impacts to human health and air quality resulting from this accounting issue. Thankfully, the accounting issues are settled by the EPA rule published on February 13, 2003.

4. There is No Need for Additional SO_2 Mitigation

In the Staff Assessment Addendum, the CEC Staff asserted that additional mitigation for the project's trace emissions of sulfur dioxide would be required. (Ex. 2, pp. 4.1-55 to 4.1-56.) The CEC Staff made this assertion notwithstanding the presentation, by Applicant, of an analysis demonstrating that the project's impacts would be fully mitigated, even if mitigation of SO_2 impacts was required. (Ex. 4A, p. 32.) The CEC Staff acknowledged that PM_{10} mitigation was being provided at a rate in excess of that necessary to also mitigate the project's SO_2 impacts. (2/19 RT 288-289.) However, the CEC Staff raised a novel argument, never before presented to the Commission, suggesting that the reason why additional SO_2 mitigation was required nonetheless was that the project's ammonia emissions were not being offset. (2/19 RT 289.) In response to further questions, the CEC Staff suggested that even if emissions were as low as one ton per year of a nonattainment pollutant, the CEC Staff would "seriously consider" requiring mitigation of that emission rate as significant. (2/19 RT 294.)

These two positions by CEC Staff – that mitigation of SO_2 emissions should be required, in excess of the surplus PM_{10} mitigation already being provided, due to the project's emissions of ammonia, and that mitigation of a nonattainment pollutant should be required at a level as low as one ton per year – are absolutely unique. The inconsistency in the CEC Staff's position is in contrast with the position taken by the CEC Staff more recently in the case of the Cosumnes Power Plant project, wherein the CEC Staff accepted the principle of 1:1 mitigation of nonattainment pollutants in the same context in which Applicant presented the issue in the SJVEC case. (Cosumnes Power Plant (01-AFC-19), CEC Staff Supplemental Testimony (3/12/03), pp. 1-4.)

As shown in Applicant's testimony, using calculation procedures used in other cases by the CEC Staff (most recently in the case of the Cosumnes Power Plant), the mitigation provided by the Applicant to satisfy the SJVUAPCD's emission offset requirements will result in net reductions in emissions of 90.8 tons/year of VOC; 118.7 tons/year of NOx; and 62.6 tons/year of PM_{10}. (Ex. 4A, p. 32, Table 4.) This conclusion is not in dispute. These reductions are in contrast to the residual SO_2 emissions increase of 21.8 tons/year. (*Ibid*). In any other proceeding – indeed, in every other proceeding in which this has been an issue – the CEC Staff would have agreed that the net reductions of 118.7 tons/year of NOx and 62.6 tons/year of PM_{10} far outweigh the impacts of the next increase of 21.8 tons/year of SO_2, and this would not be an issue for adjudication. In the interests of consistency, equity, and rationality, the Committee should reject the CEC Staff's ad hoc creation and rejection of air quality criteria from case to case. No additional SO_2 mitigation should be required for the SJVEC project.

5. The CEC Staff's Desire to Independently Review the Surrender of Emission Reduction Credits is Not Necessary Under CEQA

The CEC Staff has proposed to perform an independent review of emission reduction credits surrendered to satisfy SJVUAPCD requirements, and has created a new "standard" condition in the form of AQ-C7. (Ex. 2, pp. 4.1-66 to 4.1-67.) The CEC Staff's stated rationale for this wholly new requirement is to ensure that those credits which have been identified for use to offset the SJVEC project remain the credits that are actually surrendered. (*Ibid.*) However, the language of AQ-C7 goes well beyond this objective, and serves to provide the CEC Staff with yet another opportunity to perform an independent review of the validity of the credits. The SJVUAPCD is the only agency that has the authority and ability to evaluate the validity of emission reduction credits. While the California Air Resources Board and U.S. Environmental Protection Agency have oversight authority over the SJVUAPCD, the California Energy Commission Staff does not.

The only reason why this issue arises in the SJVEC case is the SJVUAPCD, in contrast to the practice of some other air districts, chooses not to delineate the emission reduction credit certificates in the conditions portion of the Final Determination of Compliance. These specific certificates are, however, set forth in the analysis portion of the FDOC. (Ex. 4A.37, pp. 38-43.) In subsequent correspondence with the SJVUAPCD, SJVEC slightly modified this list. (Ex. 4A.26; Ex. 4A.27.)

As an alternative to the CEC Staff's proposed AQ-C7, at the Committee's February 19th hearing, the Applicant proposed a condition that more closely parallels the Commission's authority in this area. (2/19 RT 42-48; Ex. 4A.52.) The Applicant believes that such a condition would be sufficient in this case. (See Attachment A for the Applicant's proposed AQ-C7.)

Further, in reviewing the CEC Staff's comments during the March 13th hearing on the Cosumnes Power Plant case on this same issue, the Commission Staff agreed to certain language that could be used as an alternative to Applicant's proposed AQ-C7. Based on Staff's position in the Cosumnes Power Plant Case, Applicant believes that making the following revision to the verification for Condition AQ-105 will achieve the CEC Staff's stated objectives without resulting in an independent review. This condition is based on similar language recently agreed to by CEC Staff in the Cosumnes Power Plant case.

AQ-105 Before initial operation of C-3959-1-0, C-3959-2-0, C-3959-3-0, C-3959-4-0, and C-3959-5-0, emission offsets shall be provided to offset the following increases in: PM10 - Q1: 66,234 lb, Q2: 66,234 lb, Q3: 66,234 lb, and Q4: 66,234 lb; NOx (as NO2) - Q1: 128,746 lb, Q2: 128,746 lb, Q3: 128,746 lb, and Q4: 128,746 lb; VOC - Q1: 34,378 lb, Q2: 34,378 lb, Q3: 34,378 lb, and Q4: 34,378 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201. [District Rule 2201]

Verification: The project owner shall submit copies of the surrendered ERC certificates to the CPM at least 30 days prior to first fire of the any combustion turbine at the SJVEC site and, if the certificates surrendered deviate from those listed in the FDOC at pages 38-43, as modified by Applicant's letter to the District dated December 5, 2002, the Applicant shall include detailed calculations showing that the District's offsets requirements are fully satisfied.

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D. Construction Impacts from SJVEC Are Not Atypical and San Joaquin Valley APCD Regulations and Russell City Energy Center Conditions Should Form the Basis for SJVEC Conditions.

In the Staff Assessment Addendum, a series of construction mitigation conditions were proposed that go well beyond those required by the Commission of other, similar projects. (Ex. 2, pp. 4.1-71 to 4.1-73; Ex. 4A, pp. 13-16; 2/19 RT 26, 33-34, 124-125.) The CEC Staff has made no effort to demonstrate that the construction-related air quality impacts from SJVEC are in any way unique. Furthermore, the CEC Staff has made no demonstration that the SJVUAPCD is unable to ensure that adequate dust mitigation measures will be implemented during

construction of the project. The Commission should reject the CEC Staff's unsupported, unique requirements and impose construction air quality mitigation requirements consistent with those imposed on other projects.

The CEC Staff's unique construction conditions include a requirement that SJVEC implement upwind/downwind PM_{10} monitoring during earth moving activities. (Condition AQ-SC5; Ex. 2, pp. 4.1-73 to 4.1-74.) This monitoring was first derived from a demonstration program negotiated between the CEC Staff and the Applicant in the Los Esteros Critical Energy Facility (LECEF) case. (Ex. 4A, pp. 15-16; 2/19 RT 34.) In the Los Esteros case, the CEC Staff unequivocally stated that the upwind/downwind PM_{10} monitoring was required because of the 24-hour construction schedule anticipated for that project:

> "***In the event that an expedited construction schedule is ultimately allowed***, staff believes on site ambient monitoring, more aggressive construction mitigation and/or off site contemporaneous emissions reductions will be necessary." (LECEF, 01-AFC-12, Staff's Supplemental Testimony, 5/13/02, p.6; emphasis added.)

> "***We have a unique situation here. If this were just one shift of construction we wouldn't be here asking for particulate monitors.***" (LECEF, 01-AFC-12, Testimony of CEC Staff Witness Dr. Alvin Greenberg, 5/13/02 RT 96:5-8; emphasis added.)

There is no 24-hour construction schedule proposed for the SJVEC project. (Ex. 4A, p. 15.) The CEC Staff is proposing essentially the same monitoring program for SJVEC as they did for LECEF, but with a different rationale. This is an example of how the CEC Staff creates new "standard" conditions. It begins with what they argue to be an exceptional case, with an unusual air quality impact, and once an Applicant accepts that condition the CEC Staff finds more and more "exceptional" cases in which they propose the same requirement. Ultimately, after they find three or four successive "exceptional" cases, the CEC Staff has a new "standard" condition which is imposed on all projects.

If the CEC were an air pollution control agency that was attempting to achieve ambient air quality standards, then this type of approach, which is referred to as "technology forcing", might be understandable. However, the CEC is not an air pollution control agency, and the CEC Staff appears to have lost sight of the fact that they require mitigation only for significant, adverse environmental impacts. The CEC Staff has provided no evidence whatsoever that the use of upwind/downwind monitoring would, in fact, result in lower PM_{10} emissions and, hence, would further mitigate a significant air quality impact even if there were such an impact to mitigate.

The CEC Staff has NEVER published a guideline as to what constitutes a significant air quality impact with respect to construction impacts; rather, the CEC Staff's position appears to be that they decide what mitigation they believe they should seek in a particular siting case, and then they decide upon significance criteria that indicate that the particular impact is significant and thus warrants the mitigation they propose.

In response to questions during the February 19th hearing regarding the LECEF monitoring demonstration program, the CEC Staff asserted, for the first time in the SJVEC proceeding, that they believed this monitoring program to have been deficient in implementation. (3/19 RT 271-272.) In particular, the CEC Staff asserted that the instrument should have been "cleaned and zeroed" on a daily basis. (3/19 RT 271, 304, 320-321.) The Applicant in the SJVEC proceeding was also the applicant in the LECEF proceeding; the CEC Staff's comments during the February 19th hearing regarding problems with the LECEF monitoring program were first raised in an October 30, 2002 data request to LECEF. LECEF responded to the CEC's comments one day later, on October 31, indicating that the instruments were being operated and maintained in accordance with the instrument manufacturer's recommendations. The CEC

Staff's comments at the February 19th hearing represent the first time that the CEC Staff has raised this issue since that response was filed. The comments by the CEC Staff in the SJVEC hearing on this issue are even more remarkable given the fact that:

- The CEC Staff specified the monitor that was to be used in the LECEF program.
- The CEC Staff required preparation of a monitoring protocol prior to the commencement of monitoring at the LECEF site.
- The CEC Staff reviewed and approved of the monitoring protocol prior to the commencement of monitoring at the LECEF site.
- The approved PM_{10} monitoring protocol for the LECEF site did not indicate that daily cleaning and zeroing would be performed.
- The manufacturer of the instrument used at the LECEF site (MIE, Inc.), in its published literature regarding the pDR 1000 monitor, indicates that the monitor has exceptional stability and requires re-zeroing approximately every six months or longer, depending on the operating environment.[1] In fact, LECEF has rezeroed the analyzer monthly.

[1] Applicant did not present this information at hearing because the CEC Staff's testimony on this issue was not contained in their prefiled testimony. The manufacturer's comments regarding analyzer stability can be found at http://www.anderseninstruments.com/MIE/MieWeb02/notes/tn12.html, and are as follows:

"The long-term measurement stability of a nephelometric particle monitor is of critical importance, especially when operating such an instrument on a continuous unattended basis. Were the sensitivity and/or the zero level of the monitor to fluctuate or to drift, such measurement could be subject to unacceptable errors. For measurements at low concentrations, the zero stability is critical. For example, if the zero reading (with particle-free air) of an instrument would drift as little as 0.005 mg/m3 (5 µg/m3) when monitoring a typical "clean" office environment of 10 µg/m3, the measurement error could be as much as 50%.

"The personalDataRAM achieves a remarkable degree of long-term stability, demonstrated by a 6-month long test (starting in July 1997 and ending in January 1998) during which the instrument was operated continuously in an office environment. The average concentration measured over those 180 days of operation was 0.006 mg/m3, corresponding to an integrated exposure of 26 (mg/m3) x hours, i.e. equivalent to operating at a constant concentration of 1 mg/m3 for 26 hours."

In addition to the air quality monitoring requirements in AQ-C5, the CEC Staff has imposed its new "standard" dust and Diesel exhaust mitigation conditions in AQ-C3 – notwithstanding the presence of detailed dust control rules established by the SJVUAPCD and an apparent conflict between the CEC requirements for the use of "soot filters" and federal anti-tampering regulations. (Ex. 2, pp. 4.1-71 to 4.1-73.)

With respect to the dust conditions, the CEC Staff rejects references to applicable SJVUAPCD regulations because of concerns that "The District doesn't have the manpower to be here every day to make sure they're meeting the regulation 8 rules." (2/19 RT 165.) The CEC Staff continues to opine that a reference to SJVUAPCD Regulation 8 for dust control would be inappropriate because "[t]hat would be very hard for the compliance division to make any determination of compliance because they would have to then go through all the rules and try to figure it out." (2/19 RT 191.) Finally, the CEC Staff rejects Applicant's proposed revisions to AQ-C3 because Regulation 8 doesn't address tailpipe emissions from Diesel construction equipment. (*Ibid.*) These arguments are mis-placed on several points.

First, Applicant's proposed revisions to AQ-C3 include explicit requirements for Diesel exhaust emissions precisely because SJVUAPCD Regulation 8 does not address that source of emissions. (Ex. 4A, pp. 34-35, AQ-C3 revised paragraphs (a) and (b).)

Second, the CEC Staff includes, as part of its proposed version of AQ-C3, paragraph (s) which reads as follows:

> "The construction mitigation measures shall include necessary fugitive dust control methods as required to maintain compliance with District Rules 8021 through 8081 (Conditions AQ-111 to AQ-117)." (Ex. 2, p. 4.1-72.)

Rezeroing is required more often in clean-air environments than in dirty-air environments. This is because the zero reading is more critical at low ambient conditions (such as an indoor office), and is less critical to measurement accuracy at higher ambient concentrations.

Thus, to the extent that the Applicant's version of AQ-C3 is flawed because it would require CEC compliance staff to have a detailed understanding of SJVUAPCD dust mitigation rules, the CEC Staff's version of AQ-C3 suffers from the same flaw. However, there is no such flaw; if the CEC Staff proposes to undertake independent enforcement of local air district requirements, it is not unreasonable to assume that the CEC Staff will familiarize themselves with those district requirements.

With respect to the CEC Staff's allegation that the SJVUAPCD is incapable of enforcing their own fugitive dust regulations, the allegation is simply that – there is no evidence in the record to support it. It would be presumptuous for the Commission to reach such a conclusion in the absence of any supporting evidence in the record.

Staff has simply failed to make the case for Staff's blanket allegation that the Applicant's revised construction impacts analysis was somehow inaccurate. The lack of evidence to support Staff's allegations is particularly inexcusable given: (1) Staff admitted that Staff did not fully understand Applicant's August 9, 2002 filing (Exhibit 4A.24: Letter dated August 9, 2002 from Sierra Research (Rubenstein) to CEC (Trask) re: revised construction impacts analysis (Docket # 26414) (3/19 RT 271); (2) notwithstanding the admission that Staff did not fully understand the August 9, 2002, filing, Staff elected not to submit further Data Requests seeking clarification (3/19 RT 271-272); and (3) Staff did subsequent to August 9, 2002 on November 1, 2002, promulgate additional Data Requests on other Air Quality issues but remained silent on their confusion regarding the August 9, 2002 filing. (3/19 RT 272.)

Finally, although Applicant's witness was unable to recall such a document when questioned during the February 19th hearing, the Applicant has, in fact, prepared a comparison of the dust mitigation requirements in Regulation 8 with those contained in the CEC Staff's version

of AQ-C3. This comparison is contained in Applicant's revised construction impacts analysis. (Ex. 4A.24.) This comparison demonstrates that the requirements of Regulation 8 are, in general, at least as stringent as those contained in the CEC Staff's version of AQ-C3. This comparison is unrebutted by CEC Staff in the evidentiary record.

With respect to the requirements for installation of soot filters on all large Diesel construction equipment engines, Applicant is seeking the replacement of paragraphs (p), (q) and (r) in AQ-C3 with language consistent with prior Commission decisions. These paragraphs relate to the requirement to install Diesel particulate soot filters on construction equipment. These filters are not approved by the U.S. Environmental Protection Agency as retrofit systems for certified non-road engines and, as a result, should not be required by the Commission at this time. (2/19 RT 31-32.) Furthermore, there are questions of federal pre-emption of this issue which have been raised in other Commission proceedings, but are equally applicable in this case. (2/19 RT 29-30.)

The CEC Staff's response to this issue is to suggest that (1) there was, in fact, a significant health risk associated with Diesel exhaust during construction, and (2) that the CEC Staff would not require an Applicant to do something that was illegal[2]. However, Applicant's testimony clearly demonstrates that at the nearest residential receptors, the health risk associated with Diesel exhaust during construction is well below the CEC Staff's significance levels. (2/19 RT 99.) The CEC Staff's response, during questioning, was to suggest issues related to worker safety and Proposition 65 warnings – issues which the CEC Staff has never raised in prior proceedings related to Diesel exhaust from construction equipment, and issues which are

[2] Initially, during hearings the CEC Staff asserted that a similar soot filter requirement had been imposed in the Tracy Peaker project. (2/19 RT 269.) However, the CEC Staff subsequently admitted that the condition adopted by the Commission in the Tracy Peaker case was similar to the concept proposed by Applicant in the SJVEC case.

unrelated to the discussion at hand. (*Ibid.*) With respect to the suggestion that the CEC Staff would not require an Applicant to do something that was illegal (2/19 RT 285) (i.e., retrofit soot filters to certified 1996 or newer construction equipment engines), the CEC Staff's position begs the question – why include a requirement that the CEC Staff acknowledges to be inappropriate, and then provide a mechanism for relief. Surely, a clearly stated, clearly legal requirement would be preferable, and more defensible for the Commission.

For all of these reasons, the Applicant believes that the use of Diesel particulate soot filters should not be mandated in addition to requirements for the use of EPA- or CARB-certified non-road engines.

With respect to construction mitigation requirements, the Commission should reject the CEC Staff's ad-hoc approach in its entirety. The Applicant's air quality testimony contains proposed revisions to the CEC Staff's conditions which would conform the construction mitigation conditions to those approved by the Commission in other cases. (Ex. 4A, pp. 33-36.) As an alternative, the Applicant would be willing to accept the construction mitigation conditions included in the Russell City Decision. (Russell City Energy Center, 01-AFC-7, Commission Decision, Conditions AQ-C1 to AQ-C4, pp. 94-99.)

Curiously, Staff's concerns regarding the Applicant's proposed revisions to the construction Conditions of Certification AQ-C1 through AQ-C7 seem to be rooted in a basic distrust in the Commission's own Compliance capabilities. Specifically, Staff has, in nearly all instances, strongly suggested that while the mitigation measures proposed by Applicant will work, they will only work with "aggressive" compliance:

- "The revised PM10 modeling analysis conducted by the Applicant (SR 2002c) assumes extremely aggressive PM10 fugitive dust control efficiencies, which is considered to be

(2/19 RT 285.) Applicant would be willing to accept the Diesel soot filter condition imposed on the Tracy Peaker project.

unrealistic without very aggressive compliance demonstration requirements." (Ex. 2, p. 4.1-37.)

- Q: Is it your position that the Energy Commission's compliance staff is unable to enforce conditions of certification here?
  A: It's my belief, through discussion with others, that CEC compliance staff will not be able to be at this site on a regular basis to directly enforce compliance with these requirements. (3/19 RT 3-30304.)
- "[O]ur enforcement is essentially self-policing with the monitoring of the dust mitigation requirements." (3/19 RT 267.)

Staff's position on construction mitigation measures is, in essence, this: it is not that the Applicant's proposed mitigation measures won't work; it is just that they need to be aggressively implemented. Applicant respectfully suggests that the answer is to trust the Commission's Compliance Staff to aggressively enforce not only the construction mitigation conditions, but all conditions. The Committee's Final Decision should reflect the trust that the Compliance Staff has earned.

E. Findings and Conclusions.

Based on all of these analyses, compliance with all of the applicable regulations and the additional mitigation that Applicant has proposed for the project, the SJVEC project will comply with the applicable federal, state, and local laws, ordinances, regulations, and standards, and with mitigation, does not result in any significant air quality impact.

- The SJVEC project has no significant impacts to local air quality.
- SJVEC will meet or exceed the SJVUAPCD's BACT requirements, meaning SJVEC will minimize local air quality effects.
- SJVEC's air impacts analysis confirms that there will be no significant local air quality effects.
- The Health Risk Assessment performed for the SJVEC project confirms that there are no adverse local air quality impacts.
- The SJVEC project will have no significant unmitigated impacts on regional air quality.

- The SJVEC project will not cause any significant unmitigated cumulative air quality impacts.
- The SJVEC project has identified and obtained emission reduction credits to fully offset and mitigate any potential regional air quality impact.
- Applicant and the SJVUAPCD both agree that the SJVEC project will not interfere with the attainment and maintenance of any state or federal ambient air quality standard.
- Based on criteria applied by the Commission in previous siting cases, the emission reduction credits provided by SJVEC to satisfy SJVUAPCD requirements will also ensure that the SJVEC project will not result in any significant, unmitigated air quality impacts.
- Applicant, SJVUAPCD and CEC Staff all agree that the 10 ppm ammonia slip limit imposed by the SJVUAPCD is adequate to protect air quality on both a local and regional basis.
- The Commission should not adopt construction mitigation conditions that are more stringent than those imposed on other projects.

III. NOISE

A. The SJVEC Project Will Comply with All Applicable LORS and Will Not Result in Any Significant Noise Impacts.

As with any powerplant licensed by the Commission, the construction and operation of the SJVEC will create sound. For the reasons set forth below, the record in this proceeding strongly supports the conclusion that the amount of sound or "noise" produced by the SJVEC will comply with CEQA and all applicable LORS. Based on the evidence before it, the Committee should conclude that there are no significant, unmitigated noise impacts associated with the SJVEC if the conditions proposed by the Applicant are adopted. (Ex. 4B, p. 54.)

1. The SJVEC Will Be Located on a Site Zoned for Manufacturing With Very Few Residences in the Vicinity of the Project.

The SJVEC site, which is located in the southeastern portion of the City of San Joaquin, is bounded to the north and east by Colorado Avenue and a railroad corridor. A small portion on the northern side of the site is used for heavy commercial/light industrial uses. Existing uses on the site include irrigated agriculture, power lines and an irrigation canal. The general plan land use designation for the site is Heavy Manufacturing (HM). The site is zoned Manufacturing (M). (Ex. 4B, 45-46.)

The remaining site boundary is generally surrounded by agricultural fields. Noise-sensitive land uses closest to the site consist of a few scattered residential buildings located in the farmlands surrounding the site. The closest sensitive receptor is located approximately 1,500 feet east of the project's property line at the northeast corner of Yuba Avenue and Springfield Avenue. (*Id*.)

Sources of environmental noise near the site include vehicular traffic on Colorado Avenue and the neighboring streets, rail traffic on the adjacent Union Pacific Railroad (UPRR) tracks and farm machinery. (*Id*.)

2. The SJVEC Project Will Include Extensive Onsite and Offsite Noise Attenuation Measures.

Extensive noise attenuation measures will be incorporated into the design of the SJVEC project. These measures will ensure that the noise level resulting from plant operation will not exceed 49 dBA L_{eq} at any existing residence. These noise attenuation measures include the following:

- The fuel gas compressors will be installed inside a noise attenuating building. The installed cost of this building is estimated to be $1,300,000. (Ex. 4B, p. 49.)

- The combustion turbines and generators will be designed to limit near-field noise levels to 90 dBA at 3 feet and will result in reduced community noise exposure. Specific noise attenuation measures will include acoustical enclosures for the turbines, generators, mechanical and electrical equipment packages, and inlet air silencers. (*Id*.)
- The steam turbine and generator will be designed to limit near field noise levels to 90 dBA at 3 feet and will also result in reduced community noise exposure. To accomplish this, a very large noise enclosure, installed on the steam turbine pedestal, will enclose all four sections of the steam turbine (HP, IP, and two LP sections) and the generator. The installed cost of this noise enclosure is estimated to be $300,000. (*Id*.)
- The noise generating equipment associated with the brine concentrators, including the vapor compressors and recirculation pumps, will be located inside the water treatment building in order to reduce community noise. Typically, this equipment would be located outdoors to improve access for maintenance. The added cost to locate this equipment indoors is estimated at $520,000 (4,000 sf @ $130/sf, including an overhead crane). (*Id*.)
- The cooling tower has been located at the north-east edge of the project site, maximizing its distance from the majority of the closest noise-sensitive receptors. (*Id*.)
- Silencers will be provided on steam system vent stacks to reduce noise levels. (*Id*.)
- High-noise piping, such as that contained on the HRSG duct burner skids and in the vicinity of high pressure-drop control valves will be acoustically lagged (wrapped) in order to reduce radiated noise. (*Id*.)
- Plant/instrument air compressors will be located inside the water treatment building to reduce noise levels. The added cost to locate this equipment indoors is estimated at $60,000 (600 sf @ $100/sf). (*Id*.)

- All other major plant components located outdoors will be specified to limit near field maximum noise levels to less than 90 dBA at 3 feet (or 85 dBA at 3 feet where available as a vendor standard), thus also reducing community noise. (*Id*.)

In addition to the plant design measures described above, the Applicant has offered to provide sound attenuating building upgrades for the ten isolated residential structures located nearest to the SJVEC. The Applicant sent letters to each of these property owners formally offering this sound attenuation program. To date, seven of the eight property owners (two of the owners own multiple residences) have submitted signed letters accepting the Applicant's offer and discussions continue with the eighth property owner. (Ex. 4B, pp. 49-50; Exs. 4.B.2 – 4.B.8.) This off-site sound attenuation program will provide upgrades to the homes designed to reduce interior noise levels. These acoustical upgrades include some or all of the following:

- Replacement of single-pane windows with energy efficient, noise attenuating dual-pane windows,
- Replacement of hollow-core exterior doors with solid-core doors including full perimeter weather stripping,
- Air conditioning,
- Additional sound insulation in exterior walls, and
- Sealing or baffling of exterior gaps or vents on building walls that face the SJVEC. (*Id*.)

In its Staff Assessment Addendum, Staff states that "Depending on the situation and willingness of the receptors, Staff may also consider mitigation measures applied to the houses to help insure that normal indoor household activities would not be adversely affected by plant operation noise." (Ex. 2, Addendum, p. 2-24.) Staff further states that "Such mitigation can include enhanced insulation, acoustical windows, solid core doors, and/or air conditioning." (*Id*.)

Staff indicated, however, that they did not have sufficient information to evaluate the relative merits of off-site noise abatement and that an inspection of the homes by an architect and noise consultant would be necessary to make that determination.[3] (*Id*.) In response to the Staff concerns, Applicant commissioned a Noise Insulation Feasibility Survey. This survey, conducted by an architect and a noise control engineer, addressed the feasibility, suitability, and effectiveness of the noise reduction measures proposed by the Applicant for installation at nearby residences. (Ex. 4B, p. 50.) The survey concluded that it would be feasible and effective to provide any or all of the noise insulation upgrades previously offered by the Applicant at each of the potentially affected dwellings. Local noise barriers would also be feasible for those locations where a beneficial exterior noise reduction would result. (*Id*.)

When it became clear that sound attenuation measures to be provided by the Applicant at individual residences were feasible, effective and willingly accepted by the homeowners, Staff raised a new concern at the evidentiary hearings. Assuming that the homeowners signed the letters "based on Calpine's representation of the power plant and the noise that it will create when it's operating", the Staff witness expressed his "fear that that formation, that that representation is false and misleading; that Calpine has understated the amount of noise that these people will hear from the power plant." (02/20 RT 144.) There is no indication that Staff's expressed fears are based on actual communication with the homeowners, even though Staff received these letters more than three months before the Staff testified. (Ex. 2, Addendum, p. 2-24.) Instead, Staff's fears are apparently founded on a semantic quibble regarding whether

[3] In previous proceedings, the Commission Staff has recommended that the Applicant *offer* noise attenuation at individual residences in proximity to a proposed project. (Final Decision, Three Mountain Power Plant, pp. 346-347.) In these proceedings, the Applicant merely demonstrated to the CPM that it had offered appropriate insulation; the owner of the residence was not required to accept the offer. (*Id*. at 348-349.) Moreover, this is the first proceeding in which the Staff has requested a Feasibility Survey of individual residences. Despite the

"extensive" measures are "extraordinary" or whether the combination of onsite and offsite mitigation will result in "low" residual noise levels. (2/20 RT 147-150.) In contrast to the Staff's groundless fears, the Applicant has testified specifically to its conversations with these homeowners and how the noise levels were characterized. (02/20 RT 55-56.)

B. The noise produced by the SJVEC will comply with all applicable LORS.

1. Federal

The Staff Assessment correctly identifies the Occupational Safety and Health Act of 1970 (OSHA) (29 U.S.C. § 651 et seq.) and regulations of the Department of Labor, Occupational Safety and Health Administration (OSHA) (29 C.F.R. § 1910.95) as applicable to this project. (Ex. 2, p 4.6-1.) As set forth in Condition Noise-3, the Project will comply with these Federal LORS. (Ex. 4B, p. 52.)

2. State

The Staff Assessment identities California Government Code Section 65302(f) (which encourages each local government entity to perform noise studies and implement a Noise Element as part of its General Plan) and guidelines published by the California Office of Planning and Research as published guidelines for preparing noise elements. (Ex. 2, p. 4.6-2.) Neither of these items constitutes a law, ordinance, regulation or standard with specific applicability to the SJVEC. (Ex. 4B, p. 52.)

The Staff Assessment also cites a "Model Community Noise Control Ordinance" published by the "Office of Noise Control" in 1977. (Ex. 2, p. 4.6-2.) This is merely a Model Ordinance, not a LORS. The Model Ordinance, developed 25 years ago, was only a sample or

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unprecedented nature of the Staff's request and the additional cost and burden of the survey, the Applicant has made every effort to cooperate with the Staff and respond to their stated need for additional information.

guideline to be used by agencies to develop their own applicable regulation. The office which published the Model Ordinance no longer exists, and the Model Ordinance has never been republished in any form. (Ex. 4B, p. 52.)

3. Local

The Staff Assessment alleges that there are applicable local LORS. We will address each of these in turn.

a) The SJVEC complies with the Noise Element of the City of San Joaquin General Plan.

The Noise Element of the City of San Joaquin General Plan is applicable to the SJVEC. (Ex. 4B, p. 53.) However, the Applicant does not agree with the Staff's assertion that the Noise Element "establishes land use-based allowable noise levels." (Ex. 2, p. 4.6-3.)

Instead of adopting "allowable" noise levels for new projects, the Noise Element simply requires "an acoustical analysis early in the review process when a development of a long-term project may result in neighboring or adjoining land uses being exposed to existing or future noise levels that exceed the levels specified in Table 11 (Recommended Ambient Allowable Noise-Level Objectives)." (Ex. 4B, p. 53.) The Noise Element simply requires an acoustical analysis; it does not require that the project be limited to a specific noise level. (*Id*.)

Moreover, the Noise Element does not restrict new sources of noise in areas where existing noise levels exceed the Table 11 objectives. Instead, the Noise Element requires that the City not allow new "noise sensitive land uses in areas where existing noise levels exceed the levels specified in Table 11." (Ex. 4B, p. 53.)

The SJVEC satisfies the only mandatory requirement of the Noise Element – the requirement to provide an acoustical analysis early in the review process. ((Ex. 4B, p. 53.) Section 8.5 of the AFC contains a complete acoustical analysis. (Ex. 1, Section 8.5.) In addition,

the noise levels predicted to be produced by the SJVEC conform to the Ambient Noise Level Objectives set forth in Table 11 of the Noise Element. ((Ex. 4B, p. 53.) The SJVEC is proposed to be located in an area where existing noise levels already generally exceed the levels specified in Table 11. The current ambient noise levels at monitoring locations G2, G3, G4 and G5 exceed 50 dBA on a daytime and 24-hour L_{eq} basis. The current ambient noise levels at monitoring location G5 exceed 50 dBA and the current ambient noise levels at monitoring locations G2 and G4 are just under 50 dBA on a nighttime L_{eq} basis. Because the SJVEC is not a noise-sensitive land use, it is allowed to be sited in this area under the terms of the Noise Element. (*Id.*)

b) The City of San Joaquin Nuisance Ordinances are not applicable to the SJVEC.

The Staff Assessment asserts that Sections 8.24.050 and 8.24.060 of the City of San Joaquin Municipal Code are Applicable LORS. (Ex. 2, p. 4.6-3.) However, the position of the City is that these ordinances are not applicable to the SJVEC. In a March 7, 2002 memo, Mark A. Blum, San Joaquin City Attorney concluded:

> "Based upon the foregoing excerpts from the text of Chapter 8.24, we believe it would be accurate to characterize the ordinance as a nuisance abatement tool designed to respond to incidents of unusual, unreasonably loud noise. We are not aware of any proposed use of the ordinance to prohibit the construction or operation of industrial or manufacturing facilities in appropriately zoned districts, and believe that it would be improper to use the ordinance in that context when the planning process contains opportunities for proper siting and mitigation of noise impacts." (Ex. 4B, pp. 53-54.)

The San Joaquin City Council has adopted a Resolution expressly confirming the City Attorney's opinion. (Ex. 4B.1) In addition, the San Joaquin City Council met at its regularly scheduled meeting on February 12, 2003 and passed Resolution number 03-2 in support of the San Joaquin Valley Energy Center Power Plant Project. The Resolution reads, in part:

> "Whereas, the City of San Joaquin has carefully, fully and independently evaluated the proposed project and its conformance with the laws, ordinances, and standards of the City, including the City of San Joaquin general plan.

> "Now, therefore, the City Council of the City of San Joaquin does hereby find, determine and resolve as follows: …The proposed project will comply with all applicable laws, ordinances, and standards of the City of San Joaquin over which the City has jurisdiction or would have jurisdiction but for the Commission's exclusive authority to certify sites and related energy facilities." (2/19 RT 2-3)

The Commission has a long and consistent history of deferring to local agencies in the local agencies' interpretation of their own LORS, absent a showing of special circumstances.[4] No such special circumstances are alleged, let alone reflected in the record here. Accordingly, the Committee should follow this long-standing practice of deferring to the local jurisdiction interpretations of its own LORS and find the City's nuisance ordinance inapplicable to this land use matter.

c) The Fresno County General Plan and Noise Ordinances are not Applicable to the SJVEC.

The Staff Assessment also asserts that the Noise Element of the Fresno County General Plan and the Fresno County Noise Ordinance are applicable LORS. (Ex. 2, p. 4.6-3.) However, the project is located wholly within the jurisdiction of the City of San Joaquin; therefore Fresno County does not have jurisdiction. (Ex. 4B, p. 54.) The Staff of Fresno County concurs with the Applicant and has clearly indicated that the County does not consider the County ordinance to be applicable to this project: "As a point of clarification, the location of the noise source determines the regulatory jurisdiction." (Ex. 4B.9.)

C. The noise produced by the SJVEC will not violate CEQA.

The CEQA Environmental Checklist sets forth the following criteria to evaluate whether noise from a proposed project could result in significant adverse impacts:

[4] "We accept Applicant's position that we should defer to San Jose for an interpretation of their LORS in the present situation where the City has determined that substantial compliance with the General Plan requirement furthers the City's interest. [See title 20 California Code Regulations, §1714.5 (b)] We are persuaded that the courts of record in

- Exposure of persons to, or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

- Exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels.

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Title 14, California Code of Regulations, section 15000 et seq., Appendix G)

As set forth below, the SJVEC satisfied each of these criteria.

1. The project will not generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

As explained in Section III.B.3.a, above the SJVEC complies with the noise element of the local general plan.

2. The project will not generate excessive ground-borne vibration or ground-borne noise levels.

Both the Staff and Applicant concur that the project will not generate excessive ground-borne vibration or ground-borne noise levels. (Ex. 4B, p. 55; Ex. 2, p. 4.6-7.)

3. The project will not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

In order to determine whether the project may result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, the Commission typically engages in a three step analysis. First, the Commission measures the

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California have adopted this principle as law and we believe that we are bound by the court's interpretation." (Commission Decision, Los Esteros Critical Energy Facility (LECEF), CEC Docket No. 01-AFC-12, pp. 345-46.)

existing ambient noise levels in the project vicinity. Second, the Commission forecasts the potential increase in ambient noise levels which will result from the project as proposed by the Applicant. Third, the Commission determines whether the increase in ambient noise levels is substantial and will result in an adverse effect and thus, cause a significant adverse impact. If the Commission determines that the noise from the plant will result in a significant adverse impact, the Commission will require further mitigation to supplement the noise control measures planned by the Applicant and described in the project's AFC.

a) The Appropriate Descriptor for the Purposes of CEQA is L_{dn}

In the area of noise/land use compatibility and environmental impact assessment, one of the most widely used descriptors that has withstood the test of time is the Day-Night Average Sound Level (DNL or L_{dn}). L_{dn} is the energy-average of 24 hourly $L_{eq,h}$ values, where noise occurring during the nighttime (10:00 p.m. to 7:00 a.m.) is penalized by the addition of 10 decibels. The L_{dn} descriptor is based on voluminous, well documented, and readily available scientific research. (Ex. 4B, pp. 54-55.)

There are many substantive reasons for the Commission to use L_{dn} as the primary noise evaluation benchmark for its evaluation of noise impacts under CEQA in this AFC proceeding. The L_{dn} is currently the most generally used descriptor of overall community noise environments in the United States and is broadly recommended. All federal agencies use L_{dn}- or L_{eq}-based criteria for their noise regulations and compliance with the National Environmental Policy Act (NEPA). (*Id.* at 55.)

The ANSI Standard S12.9-1996/Part 4 Quantities and Procedures for Description and Measurement of Environmental Sound – Part 4: Noise Assessment and Prediction of Long-Term Community Response provides that when the sound of interest contains no special characteristics (i.e., not high-energy impulsive, not tonal, no strong low frequency content) then the A-weighted

Day-Night Average Sound Level is the appropriate descriptor to use for assessment and prediction. (*Id*.)

Using L_{dn} or L_{eq} presents the "best available" information to the decision-makers and the general public, and both are supported by published scientific research, consistent with public policy and case law. A quotation regarding the selection of the "perfect" noise descriptor from a USAF publication is instructive:

> "It is now generally acknowledged that adoption of any reasonable noise metric for regulatory purposes would have been more productive than decades of research devoted to refining an optimal measure. It is for this reason that, a decade ago, all U. S. federal agencies concerned with environmental noise assessment agreed on the DNL [L_{dn}] for use as a general purpose measure of environmental noise exposure." (*Id*. at 55-56)

Hundreds of local agencies within California use the L_{dn} to assess noise/land use compatibility and determine noise impact for all types of projects. Federal non-transportation agencies (e.g., Federal Energy Regulatory Commission) also use L_{dn} for their environmental evaluations. In their *Draft Guidelines for the Measurement and Assessment of Low-Level Ambient Noise*, scientists from the Acoustics Facility of the Volpe Center define "low-level ambient noise" in terms of DNL/L_{dn} as "an outdoor sound environment typical of a remote suburban setting, or a rural public lands setting." where "Characteristic average day-night sound levels (DNL, L_{dn}) would generally be less than 45 dB, and the everyday sounds of nature, e.g., wind blowing in trees and birds chirping would be a prominent contributor to the DNL." The use of L_{dn}, therefore, is not limited to transportation agencies or projects. (Id. at 56.)

CEQA does not limit the evaluation of noise and its potential for impact on the community to only the daytime, the nighttime or the quietest four hours of the night. CEQA requires an evaluation of the impact on the ambient (i.e. total) noise environment. Indeed, cities and counties throughout California have general plans promulgated consistent with CEQA that

include noise standards using L_{dn}. Because the SJVEC is designed to operate throughout the day and night, the L_{dn} is especially suited to describe this noise and its greater effect at night because L_{dn} has a built-in penalty for nighttime noise and is not overly complicated. (*Id*.)

b) The Existing Ambient Noise Levels

Tables 6 and 7 in the Applicant's direct testimony set forth the ambient noise levels at 5 monitoring locations (G1-G5) in the project vicinity. These tables also estimate the ambient noise levels at the individual residences in the project vicinity, based upon the relative distance of the residences from the monitoring locations. These tables indicate that the existing ambient noise levels range from 42 to 66 dBA L_{eq} and 45 to 71 dBA L_{dn}. (Ex. 4B, pp. 57-58.)

c) The Project will not cause a Substantial Increase in Ambient Noise Levels.

Eight scattered residential properties (10 structures) are located in the vicinity of the SJVEC. As shown in Table 7, four of the eight receptor locations (R3, R5, R10 and G2) would experience an increase of no more than 1 dBA L_{dn} from the operation of the SJVEC. Two receptor locations (R6 and R9) would experience an increase of 2 dBA L_{dn}, or less. Such small increases clearly do not constitute a substantial increase. (Ex. 4B, p. 57.)

Receptor R1 would experience an increase of approximately 7 dBA L_{dn} and Receptor R2 would experience an increase of approximately 5 to 6 dBA L_{dn}. Even with a projected noise increase of 7 dBA, the resultant total noise level at Receptor R1 would be 52 dBA $L_{dn.}$ (*Id*. at 57-58.) 52 dBA L_{dn} is equivalent to a continuous noise level of about 46 dBA L_{eq} which is below the noise level objective of 50 dBA set forth in the Noise Element of the City of San Joaquin General Plan. Similarly, even with a 6-dBA L_{dn} noise increase at Receptor R2, the resultant total noise level would be 51 dBA L_{dn}. (51 dBA L_{dn} is equivalent to a continuous noise level of about

45 dBA L_{eq} which, again, is below the City's noise level objective of 50 dBA. (Ex. 4B, pp 57-58.)

While two residences may experience increases of ambient noise levels in the range of 5 to 7 dBA, L_{dn}, such increases would not be significant given the resulting total noise level of only 46 to 51 dBA Ldn.[5] (Ex. 4B, p. 58.) As described fully in the Applicant's direct testimony, the resulting noise levels of 46 to 51 dBA L_{dn} are considerably below the levels which (1) could adversely affect health (*Id.* at 59-60), (2) interfere with daily activities of the residents (*Id* at 60), (3) cause sleep disturbance (*Id.* at 60-61) or (4) interfere with speech, either indoors or outdoors. (*Id.* at 61-62.) Thus, an increase of 5 to 7 dBA L_{dn} at these residences, even if audible, would clearly not be adverse. (*Id*.)

In unscientific terms, a Commission Staff witness testified, "Any power plant here is going to be noisy compared to the environment." (2/20 RT 142.) However, mere audibility does not constitute a significant adverse impact. The CEQA Guidelines (§15064 (b)) require that "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, *based to the extent possible on scientific and factual data.*" (emphasis added.)

The Staff's visceral reaction to a "noisy" plant is premised on the assumption that "power plant noise contributes to...the sound heard when most intermittent noises cease." (Ex. 2, p. 4.6-10.) "When no traffic is driving by, no airplanes are flying overhead, no dogs are barking, no frogs are croaking, and no strong wind is blowing" power plant noise would be heard. Sound

[5] The Applicant also presented an examination of nighttime hours as a supplemental and secondary evaluation to complement the primary L_{dn} analysis. Table 8 presents the change in L_{eq} for the nighttime period (10 p.m. to 7 a.m.) at the eight receptor locations. Table 8 shows that only two of the eight receptor locations, namely R1 and R2, would experience an increase greater than 3 dBA in nighttime L_{eq} as a result of operation of the SJVEC. Depending on which measured sound level is used as the reference ambient, Receptor R1 would experience an 8 to 10 dBA increase in the nighttime L_{eq} with a nighttime L_{eq} of 46 dBA, and Receptor R2 would experience a 6 to 8 dBA increase in the nighttime L_{eq} with a nighttime L_{eq} of 44 dBA.

from the plant, according to Staff, would "contribute to, and often define the background noise level." (*Id.)*

However, Staff offers no scientific factual data to support their theory that a potential change in the makeup of audible sound for the few quietest moments during nighttime hours is an adverse significant impact. A steady, characterless background sound such as from SJVEC is generally considered the more benign by environmental noise experts. (Ex. 4B, p 67.) The plant does not need to be inaudible 100 percent of the time to avoid creating an adverse impact. (*Id*.)

Low plant noise levels will not result in significant adverse noise impact and might be beneficial to mask other intermittent noise such as that from distant traffic. Just hearing low levels of plant sound is not likely to cause significant annoyance or complaints. This is especially true if the sound from the plant may only be heard absent all other manmade and natural ambient sound. (*Id.* at 69)

In summary, as demonstrated by the testimony of Applicant's expert witnesses, mere audibility, especially mere audibility during the quietest moments of the night, does not constitute a significant adverse noise impact pursuant to CEQA. (*Id*.)

d) Staff's contention that the project will result in substantial increases in background noise levels is without merit.

(1) The Appropriate Baseline Under CEQA is the "Ambient Noise Level," Not Background Noise.

The CEQA guidelines pose the question whether the project will "increase substantially the *ambient* noise levels for adjoining areas; …"[6] (emphasis added.) The Staff's analysis commits a serious error by substituting the term "background" for the CEQA term "ambient".

The terms "ambient" and "background" have distinct technical definitions that are mutually exclusive. "Ambient sound" is defined in the American National Standard Institute

[6] *Lewis v. Seventeenth Dist. Agricultural Assn.* (1985) 165 Cal.App.3d 823, 829, fn.7.

(ANSI) standard S12.9/Parts 1 & 3-1993 as "all-encompassing sound associated with a given environment, being usually a composite of sound from many sources near and far." (Ex. 4B. p. 63.) The definition contains no limitation as to sound level magnitude or period or hours of occurrence. (*Id*.)

The Staff's definition of background noise is "When no traffic is driving by, no airplanes are flying overhead, no dogs are barking, no frogs are croaking, and no strong wind is blowing, what remains is background noise." (Ex. 2 p. 4.6-10.) In other words, background noise – as defined by the Staff – is what remains when all other sound is excluded. Staff's definition of background noise is obviously a far more restrictive measure of environmental noise than the ambient noise levels specified in the CEQA guidelines and the deviation from the typical CEQA standard is not mentioned, much less justified by Staff. Background noise, as defined by the Staff, does not represent the normal level of environmental noise at a given location and is clearly not a "composite of [all encompassing] sound from many sources" (Ex. 4B, p. 63.)

Evaluation of the change in *ambient* noise level, not *background* noise level, constitutes the appropriate methodology in accord with CEQA. If CEQA required a limited analysis of noise environment changes that would affect *only* the background noise (as opposed to all or "ambient" noise), or if CEQA directed concern *only* to the quietest noise periods in general or to the quietest specific minutes of the day, these limits would have been explicitly stated in the CEQA guidelines. They do not.

The Staff, seemingly oblivious to the distinction between ambient and background noise levels, uses the terms interchangeably in the SA and even combines these two terms into essentially a single adjective, "background ambient" or "ambient background" (e.g., Ex. 2 p. 4.6-11; See also 2/20 RT 95-97.) But when the Staff draws its ultimate conclusion that the project

would cause a significant noise impact, the Staff clearly rests its finding on the premise that the project would increase "background" noise levels (Ex. 2, Table 4, p. 4.6-9), even though these increases occur only for a very limited time (i.e., when all other natural and manmade noise intermittently ceases) (Ex. 2 p. 4.6-10.)[7]

(2) L_{90} is Not the Appropriate Descriptor for Analyzing Changes in the Ambient Environment.

To analyze whether the SJVEC will substantially change the ambient environment, the Staff utilizes an *ad hoc* version of the centile descriptor L_{90}. (Ex. 2, p. 4.6-2.) The L_{90} descriptor, by definition, describes the decibel level that is exceeded 90 percent of the measurement period. In other words, the actual sound levels are higher (louder) than L_{90} for 90 percent of the time and lower (quieter) than L_{90} for only 10 percent of the time. (Ex. 4B, p. 64.) For example, the L_{90} descriptor only describes the sound level that is not exceeded for the quietest cumulative 6 minutes during a 60-minute period; during the remaining 54 minutes of the 60-minute period the noise level is higher. (*Id.*) This Staff preference is even more restrictive than it initially appears because the sound measuring instruments calculate the centile values second by second. The L_{90} only indicates the sound level that is not exceeded during a *cumulative* (not consecutive) 10 percent of the measurement period. (*Id.*) Thus, the Staff's L_{90} preference reflects an analytical bias, focusing on the quietest, non-consecutive seconds gleaned from the quietest of the quietest times. Staff's preference for the L_{90}, while clearly articulated, is not clearly grounded in any scientific, peer-reviewed methodology and has never been subject to a public rulemaking process.

[7] Mr. Thiessen testified that the standards proposed by staff were based on "background" measurements: "Well, because based on background measurements that were provided to us, the background noise levels for the days that were sampled, anyway, vary from location to location." (2/21 RT 122)

Furthering their extremely restricted analysis of noise impacts in this case, the Staff evaluates the change in *background* noise level only during the four quietest hours of the night. By limiting the L_{90} data to the quietest four hours of the day, (Ex. 2, Table 4, p. 4.6-9) the Staff focuses on the quietest cumulative 24 minutes out of 24 hours of ambient sound. The Staff disregards a total of 23 hours and 36 minutes of daily ambient sound (98.3 percent of the day) by their method of analysis. (*Id.*) Using this variably modified $L_{90,}$ therefore, does not reasonably or accurately assess the changes in ambient noise that will be caused by the SJVEC.

Because the Staff's quietest four hour L_{90} descriptor utilizes a very small sample of the total minutes in the day and the total ambient noise environment, the results obtained are highly variable. For this reason, among others, no recognized national standards-making organization recommends or supports the use of L_{90} for noise/land use compatibility determinations, noise compliance or environmental impact assessment. (*Id.*) No federal agencies, including those with recently revised noise standards, use L_{90} as a compatibility or compliance standard. No other State of California agency uses L_{90}. None of the dozens of California counties use L_{90} and none of the hundreds of cities in California use L_{90} for noise compatibility planning or nuisance noise enforcement. (*Id.*) Mr. Thiessen testified that he had extensive experience in analyzing noise impacts, but only at the Commission had he ever used the quietest 4 hour L_{90} as the basis for measuring whether a project resulted in a substantial increase in the ambient environment. (2/21 RT 92-93, 116.) Mr. Baker testified that he was unaware of any other agencies using $L_{90.}$ (2/21 RT 116.) Mr. Buntin testified that there was a similar descriptor adopted "back in the [19]60's" but that he could not recall any specific present day agency using this noise descriptor. (2/21 RT 116-117.)

Staff cites no authority for its preference for the restricted 4 hour L_{90} descriptor because no such authority exists. As discussed immediately below, the Staff's inconsistent use of descriptors has resulted in variable results in the Commission's siting proceedings.

(3) Staff's proposal to use the quietest 4-hour L90 descriptor to measure changes in the ambient noise environment is inconsistently applied.

Regarding the Commission Staff's use of L_{90}, a Staff witness testified:

> "Okay, I can't say when the Commission Staff first started using L_{90} as a base because in the 11 years that I've been doing noise here the use of L_{90} preceded my term as a noise staffer here. I inherited it from my predecessors." (2/20 RT 140.)

In fact, L_{90} has not been consistently used to measure changes in ambient noise levels. The use of L_{90} during the quietest four hours is an even more unique and recent phenomena. Consider the following examples:

In the Three Mountain Power Project proceeding, the Staff analyzed changes in ambient noise levels caused by the Three Mountain Power Project in terms of L_{dn}, not $L_{90.}$ (Final Staff Assessment – High Desert Power Plant Part 1, p. 135, Official Notice granted at 2/21 RT 152.)

In the La Paloma AFC proceeding, where the Commission Staff also described the existing ambient noise environment as "very quiet in nature", the Staff analyzed the ambient noise environment and the resulting impact on that environment in terms of L_{dn}, CNEL and 24 hr L_{eq}. The Staff did not use L_{90}, much less the quietest four hour L_{90}. (Final Staff Assessment – La Paloma Generating Project, p. 156, Official Notice granted at 2/21 RT 151.) If the impacts of the SJVEC are measured using the same noise descriptors as used by the Staff and Commission in the La Paloma AFC, the SJVEC will be found to not result in a substantial increase in the ambient noise environment.

In the Pastoria AFC proceeding, Staff used L_{eq}, not L_{90}, to measure the ambient noise environment. (Final Staff Assessment – Pastoria Energy Facility, p. 195; Official Notice taken at 2/21 RT 151.)

Therefore, contrary to the Staff's testimony, the Commission Staff has not consistently used L_{90} over the past 11 years. Clearly, other descriptors, including L_{dn}, CNEL and 24 hr L_{eq} have been used to measure changes in the noise environment (even quiet noise environments) caused by power plants.

Moreover, the Staff's use of the quietest four hour L_{90} is a relatively recent development in Commission practice and certainly unprecedented in the noise analyses conducted by any known federal or California governmental entities. (Ex. 4B, pp. 64-65.)

The Staff Assessment stated:

> "[s]taff *usually* believes it both prudent and conservative to employ the lowest nighttime background noise level values as the relevant noise regime. To reflect the fact that noise levels vary naturally over the quietest periods, staff does not assume that the single quietest hourly background noise level is the standard for determining potential impact. Rather, it is *usual* to calculate the average L_{90} value for the quietest period of the night, typically a period of four hours or more." (Ex. 2, p.4.6-11, emphasis added.)

Yet, as the aforementioned cases illustrate, the use of a four hour L_{90} to determine potential noise impacts has not been the usual practice at the Commission.

4. The project will not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Both the Applicant and Staff agree that the project will not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Ex. 4B, p. 55.)

D. Proposed Findings

1. The project area is sparsely populated and there are only a very few scattered residences in the vicinity of the SJVEC.

2. The General Plan land use designation for the site is Heavy Manufacturing (HM). The site is zoned Manufacturing (M).

3. Construction and operation of the San Joaquin Valley Energy Center will create noise.

4. Plant construction noise levels are temporary and transitory in nature and will be mitigated to the extent feasible by requiring noise reduction devices, limiting construction to daytime hours and providing notice to nearby businesses and residences, as appropriate.

5. Construction noise along the natural gas and water pipeline routes will be temporary and will not result in significant adverse noise impacts.

6. The nearest sensitive residential receptor potentially affected by operational noise is located approximately 1500 feet from the project site.

7. Applicant's noise impact analysis used the scientifically supported noise metrics of Ldn and Leq to describe the acoustic energy of the existing ambient environment and for comparison with the future acoustic energy predicted for the ambient plus SJVEC using the same noise descriptor.

8. Operational noise from the power plant will increase the existing ambient noise levels experienced at R1, the nearest sensitive receptor, by approximately 7 dBA $L_{dn.}$ Receptor R2 would experience an increase of approximately 5 to 6 dBA L_{dn}. The resultant total noise level at Receptor R1 will be 52 dBA L_{dn} (or 46 dBA L_{eq}). At receptor R2, the resultant total noise level will be 51 dBA L_{dn} (or 45 dBA L_{eq}).

9. Four of the eight nearest receptor locations (R3, R5, R10 and G2) will increase no more than 1 dBA L_{dn} from the operation of the SJVEC. Two receptor locations (R6 and R9) will experience an increase of 2 dBA L_{dn}, or less.

10. The resulting noise level from operation of the SJVEC, after installation of onsite and offsite noise attenuation measures proposed by the Applicant, will be in compliance with the Noise Element of the City of San Joaquin General Plan.

11. Installation of onsite and offsite noise attenuation measures proposed by the Applicant will ensure that the resulting noise level from operation of the SJVEC will not substantially increase ambient noise levels at noise-sensitive receptors in the vicinity of the project.

12. The project owner will implement measures to protect workers from injury due to excessive noise levels.

E. Proposed Conditions of Certification.

Applicant understands that, except for NOISE-6, the Staff and Applicant agree on all of the Noise Conditions of Certification.

In its direct testimony, the Applicant has suggested revisions to Staff's proposed Conditions NOISE-4, NOISE-6 and NOISE-8. It is our understanding that the Staff consents to our proposed revisions to NOISE-4 and NOISE-8.

The Applicant's suggested modifications for NOISE-4 are intended to clarify that high-pressure, intermittent steam blows will be performed between 6 a.m. and 6 p.m., Monday through Saturday, whereas the low-pressure continuous steam blows will not have limitations on the time or days of the week they are performed. In addition, the section of the condition pertaining to low-pressure continuous steam blows has been modified to limit the resulting noise levels to comply with LORS, deleting the extra requirement limiting the noise levels to 10 dBA above the average night-time hourly L_{90} value.

The proposed modifications to NOISE-8 reflect the fact that directional drilling, which could be used for one or more of the project linears, will be a continuous 24 hours per day operation. Once started, it is not prudent to suspend directional drilling operation, as there is then potential for the drill bit to become lodged in the hole. The Applicant believes that it is unnecessary to place additional restrictions on the directional drilling operation given that the operations will only last several weeks. In the event that this activity results in a disturbance to any noise-sensitive receptors, provisions for dealing with such a disturbance are already addressed by NOISE-2. In addition, we recommend that the limitation on steam blow hours be deleted from NOISE–8 as NOISE-4 already covers this requirement in greater depth.

Thus, the sole remaining disagreement between the Applicant and Staff concerns NOISE-6. The Applicant's proposed modifications to NOISE-6 specify that the project noise level will not exceed 49 dBA L_{eq} at any existing residence. The Applicant also proposes an appropriate method for measuring the plant noise level included in the Commission's decisions for the Pittsburg Power Plant (now the Los Medanos Energy Center) and the Metcalf Energy Center. This method of demonstrating compliance addresses the potential difficulty that could exist in the event that ambient noise levels increase between the time that the pre-project noise measurements were made and the time that the SJVEC is operable.

The Applicant's proposed revisions to NOISE-4, NOISE-6 and NOISE-8 are set forth below:

NOISE-4 If a traditional, high-pressure intermittent steam blow process is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than ~~89 dBA measured at a distance of 50 feet and no greater than~~ 59 dBA at any noise-sensitive receptor. The project owner shall conduct high-pressure intermittent steam blows only during the hours of 6 a.m. to 6 p.m., Monday through Saturday, unless the CPM agrees to longer hours based on a demonstration by the project owner that offsite noise impacts will not cause annoyance.

If a low-pressure continuous steam blow or air blow process is employed, the project owner shall submit a description of this process, with expected noise levels and projected hours of execution, to the CPM, who shall review the proposal with the objective of ensuring that the resulting noise levels will not exceed the LORS night-time noise standard~~), and will not exceed the average night-time hourly L_{90} value by more than 10 dBA~~. If the low-pressure process is approved by the CPM, the project owner shall implement it in accordance with the requirements of the CPM.

Verification: At least 15 days prior to the first high-pressure intermittent steam blow, the project owner shall submit to the CPM drawings or other information describing the temporary steam blow silencer and the noise levels expected, and a description of the steam blow schedule.

At least 15 days prior to any low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the process, including the noise levels expected and the projected time schedule for execution of the process.

NOISE RESTRICTIONS

NOISE-6 The project design and implementation shall include appropriate noise control ~~mitigation~~ measures adequate to ensure that noise due to operation of the project will not exceed an hourly average exterior noise level of more than 49 dBA L_{eq} measured at any existing residence. ~~the values shown below:~~

~~Site~~	~~Noise Level, dBA~~
~~1&2~~	~~38 or Less~~
~~G2~~	~~47 or Less~~
~~5,6&7~~	~~36 or Less~~
~~9~~	~~38 or Less~~
~~10~~	~~40 or Less~~

No new pure-tone components may be introduced. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints. Steam relief valves shall be adequately muffled to preclude noise that draws legitimate complaints.

1. Within 30 days of the project achieving a sustained output of 80 percent or greater of rated generating capacity, the project owner shall conduct short-term survey noise measurements at monitoring sites 1, 3, 5, 9 and 10. The short-term noise measurements shall be conducted during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. In addition, the applicant shall conduct a 25-hour community noise survey at monitoring site 5. The survey during power plant operations shall also include short-term measurement of one-third octave band sound pressure levels at each of the above locations to ensure that no new pure-tone noise components have been introduced.

   The measurement of power plant noise for the purposes of demonstrating compliance with this Condition of Certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the nearest residence. However, notwithstanding the use of this alternative method for determining the noise level, the character of the plant noise shall be evaluated at the nearest residence to determine the presence of pure tone or other dominant sources of plant noise.

2. If the results from the pre-construction and operational noise surveys indicate that the noise level ~~(L90)~~ due to power plant operations ~~noise~~ exceeds the noise limit~~s~~ shown above**,** mitigation measures shall be implemented to reduce noise to a level of compliance with this ~~these~~ limit~~s~~.
3. If the results from the pre-construction and operational noise surveys indicate that pure-tones are present, mitigation measures shall be implemented to eliminate the pure-tones.

Verification: Within 15 days after completing the post-construction survey, the project owner shall submit a summary report of the survey to the City of San Joaquin~~, Fresno County,~~ and to the CPM. Included in the post-construction survey report will be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limit~~s~~, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the operational noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described above and showing compliance with this condition.

CONSTRUCTION TIME RESTRICTIONS

NOISE-8 Heavy equipment operation and noisy construction work shall be restricted to the times of day delineated below:

Monday-Saturday 6 a.m. to 6 p.m.

~~Noise due to start-up steam blows shall be restricted to the times of day delineated below:~~

~~Monday-Saturday 6 a.m. to 6 p.m.~~

Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Horizontal drill rigs may be operated on a continuous basis, provided that the rigs are fitted with adequate mufflers and engine enclosures.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project.

IV. VISUAL RESOURCES, VISIBLE WATER VAPOR PLUMES, PUBLIC HEALTH

Certain Conditions of Certification were discussed by the Staff and Applicant during evidentiary hearings related to the subjects of Visual Resources, Visible Plumes, and Public Health. In each case, Staff and Applicant reached agreement on compromise language. The specific Conditons affected are discussed below.

At the hearings, Staff and Applicant presented Joint-1, the revised version of VIS-2. This language is reproduced in Attachment A attached hereto. The revised VIS-2 is acceptable to both Staff and Applicant.

Also at the evidentiary hearings, Staff and Applicant presented Joint-2, the agreed to revisions to the visible water vapor plume condition, VIS-7. At the evidentiary hearings, Staff indicated that while they agreed with the language, Staff wanted to have the opportunity to run

the modeling with the proposed language. It is Applicant's understanding that the Staff his performed the modeling that it desired and the results are acceptable. Based on that understanding, the revised VIS-7 is acceptable. The language is reproduced in Attachment A attached hereto.

Finally, Staff and applicant arrived at compromise language for condition PH-1. The language for PH-1 was not included in the Staff Assessment or Staff Assessment Addendum. It was proposed by the CEC Staff during evidentiary hearings and was accepted by CEC Staff and Applicant at the February 19th hearing. Again, the language is reproduced in Attachment A.

V. CONCLUSION

For the reasons set forth above, the Commission should find that the SJVEC will comply with all applicable LORS. It should further conclude that the SJVEC will not cause any unmitigated, significant adverse environmental impacts on either a project specific or cumulative basis. Finally, the Commission should adopt the Conditions of Certification advocated by the Applciant set forth in this Brief.

Respectfully submitted,

Dated: March 28, 2003

ELLISON, SCHNEIDER & HARRIS L.L.P.

By _____

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ATTACHMENT A

San Joaquin Valley Energy Center
Proposed Revisions to Air Quality, Visual Resources, Visible Plume, and Public Health Conditions of Certification

Note: Changes Shown Are Redline/Strikeout Revisions To The Conditions Presented In Staff Assessment And Staff Addendum, Except Where Otherwise Noted.

AQ-C1. The project owner shall fund all expenses for an on-site air quality construction mitigation manager(s) (AQCMM) who shall be responsible for maintaining compliance with conditions AQ-C2 through AQ-C5 for the entire project site and linear facility construction. The on-site AQCMM shall have full access to areas of construction of the project site and linear facilities, and shall have the authority to appeal to the CPM to have the CPM stop any or all construction activities as warranted by applicable construction mitigation conditions. The on-site AQCMM shall have a current certification by the California Air Resources Board for Visible Emission Evaluation prior to the commencement of ground disturbance. The AQCMM need not be one individual and may have other responsibilities in addition to those described in this condition. The on-site AQCMM shall not be terminated without written consent of CPM.

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM, for approval, the name, current ARB Visible Emission Evaluation certificate, and contact information for the on-site AQCMM.

Note: The following version of AQ-C3, the "soot filter" condition, is consistent with previous Commission-approved language.

AQ-C3 The on-site AQCMM shall submit to the CPM, in the monthly compliance report (MCR), a construction mitigation report that demonstrates compliance with the following mitigation measures:

~~a) All unpaved roads and disturbed areas in the project and linear construction sites shall be watered until sufficiently wet. The frequency of watering can be reduced or eliminated during periods of precipitation.~~

~~b) No vehicle shall exceed 10 miles per hour within the construction site.~~

~~c) The construction site entrances shall be posted with visible speed limit signs.~~

~~d) All vehicle tires shall be washed or cleaned free of dirt prior to entering paved roadways.~~

~~e) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.~~

~~f) All entrances to the construction site shall be treated with dust soil stabilization compounds.~~

~~g) No construction vehicles can enter the construction site unless through the treated entrance roadways.~~

~~h) Construction areas adjacent to any paved roadway shall be provided with sandbags to prevent run-off to the roadway.~~

~~i) All paved roads within the construction site shall be swept twice daily.~~

~~j) At least the first 500 feet of any public roadway exiting from the construction site shall be swept twice daily.~~

~~k) All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or be treated with appropriate dust suppressant compounds.~~

~~l) All vehicles that are used to transport solid bulk material and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.~~

~~m) All construction areas that may be disturbed shall be equipped with windbreaks at the windward sides prior to any ground disturbance. The windbreaks shall remain in place until the soil is stabilized or permanently covered with vegetation.~~

~~n) Any construction activities that can cause fugitive dust in excess of the visible emission limits specified in Condition AQ-C4 shall cease when the wind exceeds 25 miles per hour.~~

a~~o~~) All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.

b~~p~~) All ~~large~~ construction diesel engines, ~~which have a rating of 100 hp or more, shall meet, at a minimum, the 1996 ARB or EPA certified standards for off-road equipment.~~ <u>shall comply with the following mitigation requirements, except as noted below:</u>

Engine Size (BHP)	1996 CARB or EPA Certified Engine	Required Mitigation
< 100	NA	Ultra-low Sulfur Diesel
>= 100	Yes	Ultra-low Sulfur Diesel
>= 100	No	Ultra-low Sulfur Diesel, and Diesel Particulate Filter (DPF) if suitable as determined by the CMM

(i) If the construction equipment is intended to be on-site for ten (10) days or less, then only the use of ultra-low sulfur Diesel fuel shall be required.

(ii) The CPM may grant relief from the mitigation measures listed in this condition for a specific piece of equipment if the CMM can demonstrate that they have made a good faith effort to comply with the mitigation measures and that compliance is not possible.

(iii) The use of a DPF may be terminated immediately if one of the following conditions exists, provided that the CPM is informed within ten (10) working days of the termination:

a. The use of the DPF is excessively reducing normal availability of the construction equipment due to increased downtime for maintenance, and/or reduced power output due to an excessive increase in back pressure.

b. The DPF is causing or is reasonably expected to cause significant engine damage.

c. The DPF is causing or is reasonably expected to cause a significant risk to workers or the public.

d. Any other seriously detrimental cause which has approval of the CPM prior to the termination being implemented.

~~q) All large construction diesel engines, which have a rating of 100 hp or more, shall be equipped with catalyzed diesel particulate filters (soot filters), unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types.~~

~~r) All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM that shows the engine meets the conditions AQ-C3(p) and AQ-C3(q) above.~~

c~~s~~) The construction mitigation measures shall include necessary fugitive dust control methods ~~as~~ required to maintain compliance with District Rules 8021 through 8081 (Conditions AQ-111 to AQ-117).

~~Observations of visual dust plumes, and/or a differential in the downwind minus upwind PM_{10} instrument results of 5 ug/m^3 or more would indicate that the existing mitigation measures are not resulting in effective mitigation. The CMM shall implement the following procedures for additional mitigation measures if the CMM determines that the existing mitigation measures are not resulting in effective mitigation:~~

~~a) The CMM shall direct more aggressive application of the existing mitigation methods within 15 minutes of making such a determination.~~

~~b) The CMM shall direct implementation of additional methods of dust suppression if step a) specified above, fails to result in adequate mitigation within 30 minutes of the original determination.~~

~~c) The CMM shall direct a temporary shutdown of the source of the emissions if step b) specified above fails to result in adequate mitigation within one) hour of the original determination. The activity shall not restart until one full hour after the shutdown. The owner/operator may appeal to the CPM any directive from the CMM to shutdown a source, provided that the shutdown shall go into effect within one hour of the original determination unless overruled by the CPM before that time.~~

Verification: In the MCR, the project owner shall provide the CPM a copy of the construction mitigation report and any diesel fuel purchased records, which clearly demonstrates compliance with condition AQ-C3.

AQ-C4 No construction activities are allowed to cause visible emissions at or beyond the project site fenced property boundary. No construction activities are allowed to cause visible plumes that exceed 20 percent opacity at any location on the construction site. No construction activities are allowed to cause any visible plume in excess of 200 feet beyond the centerline of the construction of linear facilities, or cause visible plumes to occur within 100 feet upwind of any occupied structures located outside the construction area.

Verification: The on-site AQCMM shall conduct a visible emission evaluation at the construction site fence line, or 200 feet from the center of construction activities at the linear facility, or adjacent to occupied structures outside the construction area, each time he/she sees excessive fugitive dust from the construction or linear facility site. The records of the visible emission evaluations shall be maintained at the construction site and shall be provided to the CPM on the monthly construction report.

AQ-C5 The project owner shall ensure that the AQCMM prepares and directs implementation of an Ambient Air Monitoring Program (AAMP) to measure PM10 emissions during excavation, earthmoving and grading activities. The project owner/operator shall submit the AAMP to the CPM for review and approval. The AAMP shall include, at a minimum, the following:

1. The use of real-time simultaneous upwind and downwind PM_{10} monitoring instruments;
2. A description of the data to be collected;
3. A description of how the data collected will be used to assess the effectiveness of the mitigation measures implemented under the CMP, including assessing the potential need for monitoring multiple activities on site simultaneously;

Verification: The AAMP shall be included as part of the CMP required by Condition of Certification **AQ-C2**. Monitoring records, including monitoring data from all upwind and downwind monitors, hourly wind speed and wind direction, and records of dust suppression measures implemented, shall be maintained on-site throughout construction and shall be made available to the CPM upon request. A summary of the monitoring records and the dust suppression activities shall be included in each AAMP submittal Any changes to the AAMP or associated protocols require approval from the CPM.

AQ-C6 The project owner shall submit to the CPM for review and approval any modification proposed by ~~either~~ the project owner ~~or issuing agency~~ to any project air permit conditions of approval. The project owner shall submit to the CPM any modification proposed to any permit issued by the District or EPA, and any revised permit issued by the District or EPA, for the project.

Verification: The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal ~~either~~ by ~~1)~~ the project owner to an agency~~, or 2) receipt of proposed modifications from an agency~~. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

AQ-C7 The project owner shall maintain emission reduction credits committed to the SJVEC project to offset the quarterly emissions provided in Table AQ-C7-1.

TABLE AQ-C7-1 – SJVEC Emission Offset Requirements

	Offset Requirements (lbs/quarter)			
Pollutant	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
NO_x	128,746	128,746	128,746	128,746
VOC	34,378	34,378	34,378	34,378
PM_{10}	66,234	66,234	66,234	66,234
SO_2	10,908	10,908	10,908	10,908

Further, the project owner shall commit specific emission reduction credits, as provided in Table AQ-C7-2, as the offset package for the SJVEC project.

Table AQ-C7-2 – SJVEC Project Committed ERCs

ERC Source	SJVEC Project ERC credits (lbs/quarter)			
NO_x Credits	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ERC Number(s) **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**
VOC Credits				
S-1665-1	8,440	8,546	8,621	8,621
ERC Number(s) **(to be provided))**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**
PM_{10} Credits				
N-208-4	715	8,177	6,581	715
S-1557-4	489	0	0	23,085
S-1578-4	421	0	176	46,954
S-1666-4	0	0	0	18,238
S-1682-4	1,340	0	0	0
S-1685-4	2,953	0	0	8,168
S-1686-4	87	0	721	10,072
S-1687-4	0	0	610	0
S-1688-4	0	0	0	2,736
S-1691-4	0	0	0	856
S-1692-4	0	0	101	14,019
N-297-4	0	0	101	66,394
C-447-4	0	0	0	7,953
ERC Number(s) **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**
SO2 Credits				
ERC Number(s) **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**	Value **(to be provided)**

~~The project owner shall not use any of the ERCs identified in Table AQ-C7-2 for purposes other than offsetting the SJVEC project.~~

~~**Verification:** At least 60 days prior to commencing turbine first fire, the project owner shall surrender the identified ERCs and in the amounts shown in Table AQ-C7-2 to the District and provide documentation of that surrender to the CPM.~~

AQ-C7: The Applicant shall obtain any required emission offsets within the time required by the applicable district rules, consistent with any applicable federal and state laws and regulations, and prior to the commencement of the operation of the proposed facility.

Verification: Prior to commencement of the operation of the proposed facility, the applicant shall have obtained any required offsets and shall provide documentation to the CPM confirming that the required offsets have been surrendered to the SJVUAPCD.

Note: The following change proposed to the verification language for AQ-105 was not presented at hearing, but is described in Applicant's opening brief.

AQ-105 Before initial operation of C-3959-1-0, C-3959-2-0, C-3959-3-0, C-3959-4-0, and C-3959-5-0, emission offsets shall be provided to offset the following increases in: PM10 - Q1: 66,234 lb, Q2: 66,234 lb, Q3: 66,234 lb, and Q4: 66,234 lb; NOx (as NO2) - Q1: 128,746 lb, Q2: 128,746 lb, Q3: 128,746 lb, and Q4: 128,746 lb; VOC - Q1: 34,378 lb, Q2: 34,378 lb, Q3: 34,378 lb, and Q4: 34,378 lb. Offsets shall be provided at the appropriate distance ratio specified in Rule 2201. [District Rule 2201]

Verification: The project owner shall submit copies of the surrendered ERC certificates to the CPM at least 30 days prior to first fire of the any combustion turbine at the SJVEC site and, if the certificates surrendered deviate from those listed in the FDOC at pages 38-43, as modified by Applicant's letter to the District dated December 5, 2002, the Applicant shall include detailed calculations showing that the District's offsets requirements are fully satisfied.

Note: The following condition (VIS-2) was not included in the Staff Assessment or Staff Assessment Addendum. The language below is the compromise language crafted by Staff and Applicant, as discussed at the February 19th hearing.

VIS-2 The project owner shall prepare and implement an approved perimeter and offsite landscape plan that will screen the power plant consistent with the specification set forth in the protocol below, visually integrate the project into its setting, and to the extent feasible support the City of San Joaquin's urban design objectives. Landscaping shall consist of a mix of trees, shrubs, and groundcovers. Landscaping shall include various varieties of trees along Colorado Avenue, along Colusa Avenue on the City-owned property between Springfield Avenue and Cherry Lane, and along Manning Avenue East from Colorado Avenue to Placer Avenue. Fast growing evergreen species shall be used to ensure that maximum screening is achieved as quickly as possible and year-round. Suitable irrigation shall be installed to ensure survival of the plantings. Landscaping shall be installed consistent with the City of San Joaquin zoning ordinance.

Protocol: The project owner shall simultaneously submit a landscape plan to the City of San Joaquin for review and comment, and to the CPM for review and approval. The plan shall include, but not be limited to:

1. A detailed landscape, grading, and irrigation plan, at a reasonable scale, which includes a list of proposed tree and shrub species and installation sizes, and a discussion of the suitability of the plants for the site conditions and mitigation objectives. A list of potential tree species that would be viable in this location shall be prepared by a qualified professional arborist familiar with local growing conditions, with the objective of providing the widest possible range of species from which to choose. The plan shall demonstrate how the screening conditions called for above shall be met, including evidence provided by a qualified professional arborist that the species selected are both viable and available. The plan shall specify a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction. Such a landscaping plan shall include the following elements:

    a. Specification of the locations proposed for each type of landscaping, and the proposed spacing of plants;

    b. For the southeastern corner of the project property (i.e. the area bound by the Union Pacific Railroad tracks on the east and Springfield Avenue on the south, and extending from southeastern end of the cooling tower to the southwest edge of the switching station), a landscape design that provides adequate screening of views toward the project facilities from the adjacent roadways, and which creates an attractive entry into the City of San Joaquin. This design shall include the use of a substantial number of palm trees at the intersection of Colorado and Springfield Avenues to create a landmark feature. Palm species of varying heights shall be used to create a vegetative mass that will provide a degree of project screening in views from the intersection at the time of planting. In the area behind the palm trees and

along the edges of the project property extending from the grouping of palm trees north to the southeastern edge of the cooling tower and west to the southwestern edge of the switching station, a row of tall, fast-growing broadleaf evergreen trees and evergreen shrubs shall be specified. In the area to the west of the grouping of palms, the design of the row of broadleaf evergreen screening trees will make use of lower growing species in the areas under the proposed transmission lines where conductor clearance requirements need to be met.

c. Two offset rows of tall fast-growing broadleaf evergreen trees extending along the perimeter of the project site from the northern corner of the site to the southeast end of the cooling tower;

d. Along the east side of Colusa Boulevard from Springfield Avenue north for approximately ¼ mile, a row of smaller scale trees or shrubs that are attractive in close range views planted in front of a single row of tall, fast-growing broadleaf evergreen trees.

e. Two offset rows of fast-growing tall broadleaf evergreen trees around the perimeter of the northern corner of the project site;

f. Along the south side of Manning Avenue between Colorado Avenue and Placer Avenue, a single row of palm trees that are of a species that are consistent with the City of San Joaquin's street tree plan for this area and which are a minimum of 15 feet in height at the time of planting. In order to provide a measure of eye-level screening of views toward the project site from Manning Avenue and viewpoints to the north, the spaces between the palm trees shall be planted with lower growing evergreen trees or shrubs; the selection of which species of tree or shrub to use should be made in consultation with the City of San Joaquin. Along the north side of Manning Avenue between Colorado Avenue and Placer Avenue, a single row of palm trees that are of a species that are consistent with the City of San Joaquin's street tree plan for this area and which are a minimum of 15 feet in height at the time of planting.

g. Along the western edge of the project site, extending from the northwest corner to a point approximately 200 feet south of Cherry Lane, a staggered row of tall, fast-growing broadleaf evergreen trees.

h. The gas metering station shall be given landscaping that will cause it to blend into its setting.

2. Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project; and

3. A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project.

4. The project owner shall not implement the plan until the project owner receives approval of the plan from the CPM.

Verification: At least 60 days prior to start of construction (defined as onsite work to install permanent equipment or structures for any facility), the project owner shall submit the landscape plan to the City of San Joaquin for review and comment and to the CPM for review and approval.

If the CPM notifies the project owner that revisions of the submittal are needed, within 30 days of receiving that notification the project owner shall prepare and submit to the CPM a revised submittal.

The project owner shall complete installation of the landscaping prior to the start of commercial operation. The project owner shall notify the CPM within seven days after completing installation of the landscape screening that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in each Annual Compliance Report.

After the start of commercial operation, the CPM may inspect the landscaping and determine whether it is consistent with the plan as approved. If the CPM determines that the landscaping is not consistent with the plan as approved, within 90 days of notification by the CPM, the project owner shall provide a schedule to bring the installation of landscaping into conformance with the plan as approved.

VIS-7 The project owner shall ensure that the SJVEC cooling tower is designed and operated so that the plume frequency will not increase from the design as certified.

Verification: At least 30 days prior to ordering the cooling towers, the project owner shall provide to the CPM for review ~~and approval~~ the final design specifications of the cooling tower related to plume formation. The project owner shall not order the cooling tower until notified by the CPM that the following two design requirements have been satisfied:

The cooling tower ~~shall be designed and operated so~~ design confirms that the exhaust air flow rate per heat rejection rate (1) will not be less than ~~29.9~~ 27.2 kilograms per second per megawatt when operating without duct firing when ambient temperatures are ~~below 62~~ between 32 degrees Fahrenheit and 100 degrees Fahrenheit; and (2) will not be less than ~~18.0~~ 15.7 kilograms per second per megawatt when operating with duct firing when ambient temperatures are ~~below 72~~ between 32 degrees Fahrenheit and 100 degrees Fahrenheit.

The project owner shall provide ~~cooling tower operation recording data and~~ a written certification in each Annual Compliance Report to demonstrate that the cooling towers have consistently been operated within the above specified design parameters, except as necessary to prevent damage to the cooling tower. If determined to be necessary to ensure operational compliance, based on legitimate complaints received or other physical evidence of potential non-compliant operation, the project owner shall monitor the cooling tower operating parameters in a manner and for a period as specified by the CPM. For each period that the cooling tower operation monitoring is required, the project owner shall provide to the CPM the cooling tower operating data within 30 days of the end of the monitoring period. The project owner shall include with this operating data an analysis of compliance and shall provide proposed remedial actions if compliance cannot be demonstrated.

Note: The following condition (PH-1) was not included in the Staff Assessment or Staff Assessment Addendum. It was proposed by the CEC Staff at hearing, and the following was the version accepted by CEC Staff and Applicant at the February 19th hearing:

PH-1. The project owner shall develop and implement a cooling tower Biocide Use and Monitoring program to ensure that the potential for bacterial growth is ept to a minimum. The Biocide Use and Monitoring program shall incorporate, as applicable, the Best Practices and Recommendations for Minimization of Risks Associated with Legionella as outlined in the Cooling Tower Technology Institute February 2000 publication titled Legioellosis, Guideline: Best Practices for Control of Legionella. The Biocide Use and Monitoring Program shall specifically address full- and part-load plant operation, and short and long-term shutdowns.

Verification: At least 60 days prior to the commencement of cooling tower operations, the Biocide Use and Monitoring program shall be provided to the CPM for review and approval.

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of:	)	
	)	Docket No. 01-AFC-22
Application for Certification for	)	
the San Joaquin Valley Energy Center	)	
	)	

PROOF OF SERVICE

I, Ron O'Connor, declare that on March 28, 2003, I deposited copies of the attached *Applicant's Post-Hearing Brief* in the United States mail in Sacramento, California, with first-class postage thereon fully prepaid and addressed to all parties on the attached service list.

I declare under the penalty of perjury that the foregoing is true and correct.

Ron O'Connor

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